

to the bottom and as two adjacent walls are folded up, they interlock or lock together via a latching means (54). In using this type of construction, the open outer case (1) with the hingeably attached side walls not yet folded up is laid out on a reasonably flat surface, a liner (2) is placed thereover or a liner-wrapped inner tray is placed over the bottom (51). Two adjacent side walls (52) are raised and interlocked or latched together. The third and fourth side walls (52) are then raised in any sequence and interlocked or latched to the already standing sidewalls (52). The raised sidewalls (52) simultaneously raise the liner (2) that covered them (when the inner tray (3) was not previously wrapped) and once the side walls (52) are raised, the liner can be folded as discussed above. This embodiment, while being more time consuming, offers the advantage that the potential for ripping or tearing the liner (2) in the course of placing the liner (2) or the inner tray (3) into the outer case (1) is still further reduced, since the liner (2) and inner tray (3) do not have to slide past portions of the outer case (1) sidewalls during their placement into the outer case (1). In either situation, once the side walls (52) have been elevated and the inner tray (3) is wrapped in the liner (2), the four sidewalls (52) of the outer case (2) are secured by the outer case lid (4). In a preferred embodiment, the outer case lid (4) may be part of the hinged assembly and when stored may lay in flat sheets. In this preferred embodiment (FIG. 6), the outer case lid (4) is hingeably attached to a portion of one of the side walls 52, which edge is other than the edges that are attached to bottom (51) and the edges designed to latch to other sidewall (52) edges. In this way, the lid is always attached to the rest of the case that it fits and avoids misplacing the appropriate lid.

[0032] As a further alternative, the inner tray (3) may be simply a smaller sized outer case (without handles) that can fit within the larger outer case (1).

[0033] The present invention thus provides (1) a low cost means for providing a sterilization means, (2) a means for sterilization that is suitable for odd shaped or oversized items needing sterilization, and (3) improves sterilization maintenance by assuring fewer (if not completely eliminating) breaches in the wrappings used.

We claim:

1. A sterilization container system for sterilizing objects therein comprising

- (a) an outer case having a bottom and four outer case side walls, said outer case bottom and said outer case four sidewalls defining an outer case interior;
- (b) an outer case lid;
- (c) a liner;
- (d) an inner tray having an inner tray bottom and four inner tray side walls, said inner tray bottom and four inner tray side walls defining an inner tray interior; and
- (e) optionally, an inner tray lid;

wherein in use, said inner tray carries one or more objects for sterilization in said inner tray interior, said inner tray optionally having said inner tray lid thereon, said inner tray along with said objects and optionally said inner tray lid being wrapped within said liner to form a wrapped inner tray, and said wrapped inner tray located in said outer case interior, with said outer case lid closing said interior of said outer case.

2. The system of claim 1 wherein at least one of said outer case bottom, said outer case side walls and said outer case lid contains perforations; and at least one of said inner tray bottom, said inner tray side walls, and if present, said optional inner tray lid contains perforations.

3. The system of claim 2 wherein each of said outer case bottom, said outer case side walls and said outer case lid, said inner tray bottom, said inner tray side walls, and if present, said optional inner tray lid contains perforations.

4. The system of claim 2 wherein said perforations in the inner tray are offset from said perforations in said outer case.

5. The system of claim 3 wherein said perforations in the inner tray are offset from said perforations in said outer case.

6. The system of claim 1 wherein said outer case is of a material selected from the group consisting of metal, metal alloy, anodized metal, anodized metal alloy, conductive plastic, polysulfone, polypropylene, liquid crystal polymer, and mixtures, blends, composites, and hybrids thereof.

7. The system of claim 6 wherein said outer case is constructed of a metal selected from the group consisting of stainless steel, aluminum, aluminum alloy, titanium, magnesium, mixtures thereof, blends thereof, and composites thereof; each of said metals optionally having an anodized layer thereon.

8. The system of claim 6 wherein said anodized metal and anodized metal alloy have an anodization layer not greater than 0.5 mils thick.

9. The system of claim 1 wherein said outer case lid is of a material selected from the group consisting of metal, metal alloy, anodized metal, anodized metal alloy, conductive plastic, liquid crystal polymer, and mixtures, blends, composites, and hybrids thereof.

10. The system of claim 9 wherein said outer case lid is constructed of a member selected from the group consisting of steel, stainless steel, aluminum, aluminum alloy, titanium, magnesium, mixtures thereof, blends thereof, and composites thereof; each of said metals optionally having an anodized layer thereon.

11. The system of claim 9 wherein said anodized metal and anodized metal alloy have an anodization layer not greater than 0.5 mils thick.

12. The system of claim 1 wherein said inner tray is of a material selected from the group consisting of metal, metal alloy, anodized metal, anodized metal alloy, conductive plastic, liquid crystal polymer, and mixtures, blends, composites, and hybrids thereof.

13. The system of claim 12 wherein said inner tray is constructed of a member selected from the group consisting of, stainless steel, aluminum, aluminum alloy, titanium, magnesium, mixtures thereof, blends thereof, and composites thereof; each of said metals optionally having an anodized layer thereon.

14. The system of claim 12 wherein said anodized metal and anodized metal alloy have an anodization layer not greater than 0.5 mils thick.

15. The system of claim 1 wherein said inner tray lid is of a material selected from the group consisting of metal, metal alloy, anodized metal, anodized metal alloy, conductive plastic, liquid crystal polymer, and mixtures, blends, composites, and hybrids thereof.

16. The system of claim 15 wherein said outer case lid is constructed of a member selected from the group consisting of, stainless steel, aluminum, aluminum alloy, titanium,